Claim 1 (currently amended): A fast Fourier transform method, comprising the steps of:

(a) storing data in sequence in memory;

(b) partitioning a fast Fourier transform into three or more stages;

(c) within each of said stages ordering the butterfly computations to correspond to said sequence.

Claim 2 (currently amended): The method of claim 1, further comprising the steps of:

(a) providing a redundant twiddle factor table for incremental accessing including a first set of twiddle factors plus a second set of twiddle factors wherein said second set is a subset of said first set.

Claim 3 (new): A fast Fourier transform method, comprising the steps of:

(a) providing N-point data where N is a positive integer;

(b) computing radix-R butterflies in a block of N/R overlapping butterflies of said data where R is a positive integer;

(c) computing radix-R butterflies in a first block of N/R^2 overlapping butterflies of the results of step (a); and

(d) after step (c) computing radix-R butterflies in a second block of N/R^2 overlapping butterflies of the results of step (a).

Claim 4 (new): The method of claim 3, wherein:

(a) R equals 2.

Claim 5 (new): The method of claim 3, wherein:

(a) R equals 4.

Claim 6 (new): The method of claim 3, further comprising:

(a) providing a redundant twiddle factor table including a first set of twiddle factors plus a second set of twiddle factors wherein said second set is a subset of said first set.